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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,005

12/23/2005

Antoine Gauriat

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EXAMINER

KRUER, KEVIN R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/16/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,005	<b>Applicant(s)</b> GAURIAT ET AL.	
	<b>Examiner</b> KEVIN R. KRUER	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/27/09 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 and 17-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims state a molecular weight for the styrene maleic anhydride copolymer but do not specify how the molecular weight is determined. A polymer's reported molecular weight can vary significantly based upon the method by which it is calculated: weight average, molecular average, number average, etc.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4-14, 17 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 4,690,856) in view of Kashahara et al (US 4,421,892).

Ito teaches a laminate comprising two metal sheets adhered together with a polyamide composition (abstract). The composition may comprise 50-99.5wt% of a polyamide, and 0.5-50wt% of a modified polyolefin formed by grafting a polyolefin with an unsaturated compound including carboxylic acids and a derivative thereof such as maleic acid anhydride (col 3, lines 1+). The metal may comprise aluminum (col 5, lines 25+) and may be different. The polyamide is a nylon 6 (col 2, lines 23+). The olefin may be polyethylene or a non-linear ethylene (col 2, lines 51+). The laminate may further comprise a resin layer between two adhesive layers (col 5, lines 38+).

With regards to claim 14, polyamide is considered to be the continuous stage since it comprises the majority of the composition.

With regards to claim 19, Ito teaches additives may be included in the adhesive (col 5, lines 6+). Thus, it would have been obvious to the skilled artisan to add a fire retardant to the composition because such additives are commonly used in such adhesives in order to improve fire resistance.

With regards to claims 21-23, Ito teaches said method limitations (col 5, lines 60+).

Ito does not teach the composition should further comprise a styrene-maleic anhydride copolymer having the claimed molecular weight. However, Kashara teaches the addition of a styrene maleic anhydride copolymer to polyamide will result in a composition having improved mechanical strength, high dimensional stability, good moldability, and good resistance to chemicals, heat and abrasion (col 3, lines 2+). Said styrene maleic copolymer is used in amounts of 10:90-65:35 relative to the polyamide (abstract). The styrene maleic anhydride's molecular weight should be selected based upon processability and strength considerations and should be at least 30,000 (col 7, lines 31+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a styrene maleic anhydride with a molecular weight of 30,000-50,000 to the polyamide composition taught in Ito in order to improve the composition's mechanical strength, dimensional stability, moldability, and resistance to chemicals, heat and abrasion.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 4,690,856) in view of Kashara (US 4,421,892) as applied to claims 1, 2, 4-14 and 17-24, and further in view of applicant's admissions.

Ito teaches the metal sheets may be different but does not admit they may have different surface dimensions. However, Applicant admits laminates wherein the sheets have different surface dimensions are known in the art and called patchwork sheets (see page 4 of the specification). Thus, it would have been obvious to utilize sheets with different surface dimensions in the laminate taught in Ito. The motivation for doing so would have been so the sheet had utility as a patchwork sheet.

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7. Claims 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 4,690,856) in view of Kashara (US 4,421,892), as applied above to claims 1,2, 4-17 and 19-24, and further in view of Ohmae et al (US 5,047,479).

Ito does not teach the adhesive should comprise an epoxy compound. However, Ohmae teaches a thermoplastic resin composition which is obtained from melt kneading 60-97 pbw polyamide, 3-40pbw ethylene copolymer comprising 40-90wt% ethylene and 5-60wt% unsaturated carboxylate unit, and 0.3-10wt% of maleic anhydride unit, and © 0.1-20pbw of a polyfunctional compound having at least two functional groups having reactivity to a carboxyl group, a carboxylic acid anhydride group or an amino group to effect partial crosslinking (abstract). Said polyfunctional compound may be a glycidyl bisphenol (col 4, lines 40+) and improves the heat resistance, impact resistance, and mechanical properties of the composition. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.1-20wt% glycidyl bisphenol A to the composition taught in Ito. The motivation for doing so would have been to improve the heat resistance, impact resistance, and mechanical properties of the composition. Herein, the epoxy compound is understood to read on the claimed reactive compound.

### ***Response to Argument***

Applicant's arguments filed July 27, 2009 have been fully considered but are moot in view of the new grounds of rejection.

With regards to the comments on page 10, lines 20-23, said arguments are noted but are insufficient to establish a showing of unexpected results. Furthermore, it is

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noted that the composition's tensile modulus, adhesion, and thermal stability are neither explicitly claimed nor has it been demonstrated that the claimed invention inherently possesses said properties but the prior art does not.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Krueer/  
Primary Examiner, Art Unit 1794

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